

AMENDMENT UNDER 37 C.F.R. § 1.111
US Appln. No. 09/771,631

REMARKS

Claims 1-14 are all the claims pending in the application. All the claims stand presently rejected under 35 U.S.C. § 112, second paragraph, and under 35 U.S.C. § 102(b) as being anticipated by Saucedo et al (US Patent No. 5,754,738). By this Amendment, Applicants amend claim 1 and add new claims 15 and 16 to the application. The amendments to claim 1 do not narrow the literal scope of the claims and are not made for reasons of patentability. Thus, the amendments to claim 1 do not implicate an estoppel in the application of the doctrine of equivalents.

Formal Matters:

Applicants respectfully note that the Examiner overlooked to indicate consideration of the last reference listed on Form PTO-1449 filed on January 30, 2001 (i.e., Larsen, Amy K, The Next Web Wave, Data Communications Vol. 25, No. 1 (Jan. 1996), pp. 31-32, 34). Therefore, Applicants respectfully request the Examiner to again initial the Form PTO-1449 indicating that all the references, including the above-mentioned Article, were considered in the prosecution of the present application, and to return same to the undersigned. For the Examiner's convenience, Applicants include a copy of the Form PTO-1449 as filed on January 30, 2001, but listing only the un-initialed reference.

The Rejection of Claims 1-14 under 35 U.S.C. § 112, second paragraph

The grounds of rejection indicate in item 8 of the present Office Action that claims 1-14 are too broad, and therefore, according to the Examiner, indefinite. However, Applicants

respectfully refer the Examiner to MPEP § 2173.04, which explains that claim breadth does not justify a rejection under 35 U.S.C. § 112, second paragraph. Therefore, Applicants respectfully request withdrawal of the § 112 claim rejections.

The Rejection of Claims 1-14 under 35 U.S.C. § 102(b) in view of Saucedo et al.

Fig. 1 of the application shows a schematic diagram of an information, operation and monitoring system in accordance with the present invention. The information, operation and monitoring system has a data processing device 2. A connection line 21 is provided between a transmission/receiving device of the data processing device 2 and a real device/facility 20. The real device/facility 20 is, for example, a spray machine.¹

A virtual component K represents the real device 20 in its entirety, whereas virtual subcomponents T1..Tn represent the real subcomponents of the entire system. These virtual subcomponents T1..Tn are linked to one another in correspondence with the physical-technical and/or operational relationships of or within the real device 20.²

Amended claim 1 is directed to an information, operating or monitoring system for a real device having real subcomponents. The system comprises a data processing device, which has a software model including virtual components. Therein, as recited in amended claim 1, the virtual components are linked to each other in correspondence to relationships of or within the real device (emphasis added).

¹ See application text, page 8, ln. 4-11

² See application text, page 8, ln. 13-18

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The grounds of rejection for claim 1 refer to col. 1, ln. 8-14, and to col. 1, ln. 37, to col. 2, ln. 23, of the Saucedo reference. However, there is no teaching or suggestion in these passages (or, for that matter, in any other passage of the Saucedo reference) of a software model of a real device, wherein the software model includes virtual components that are linked to each other in correspondence to relationships of or within the real device, as recited in amended claim 1.

Rather, as noted by the Examiner, these passages merely teach, among other things, that the Saucedo reference is directed to a computerized prototyping system containing a virtual system design environment, and more particularly, to a computerized prototyping system which allows a user through a graphical user interface to dynamically change a model and to reevaluate its functions, and to automatically optimize the model with the help of a knowledge-based expert system. Col. 1, ln. 8-14.

This disclosure of the reference does not teach or even suggest the subject matter claimed in amended claim 1 that “the virtual components are linked to each other in correspondence to relationships of or within the real device.” In fact, in the present Office Action, the Examiner refers only generally to this disclosure of the reference, without specifying how or why this disclosure can be allegedly equated to the above-cited specific limitations of amended claim 1.

Since at least the above-cited limitations of amended claim 1 are not taught or suggested in the Saucedo reference, Applicants submit that amended claim 1 is patentable over the prior art made of record. The dependent claims 2-7 are patentable at least by virtue of their dependency from claim 1.

Independent claim 8 is directed to a method for operating and monitoring a real device having real subcomponents, wherein a “model structure comprises a linkage of the virtual components in correspondence to relationships of or within the real device.”

Therefore, Applicants submit that patentability arguments analogous to those presented in connection with the patentability of amended claim 1 apply to independent claim 8 with equal force. In addition, by citing col. 4, ln. 51-63, of the reference, the Examiner refers again only in very general terms to the disclosure of Saucedo that “[e]ach stage will be associated with a set of specification ... The components of the overall system is shown in Fig. 4. The flow-chart representation of the evaluation methodology is shown in Fig. 5.” However, it is unclear how specifically at least the above-cited limitations of claim 8 are allegedly taught or suggested by this disclosure. On its face, the cited passage at col. 4, ln. 51-63, does not teach or suggest the limitation in fact claimed.

For at least these reasons, Applicants submit that independent claim 8 is patentable over the prior art made of record. The dependent claims 9-13 are patentable at least by virtue of their dependency from independent claim 8.

Claim 14 is directed to a user interface for operating and monitoring a device comprising subcomponents interrelated through technical relationships, wherein respective information sets on each screen window are linked to each other by at least one cross-reference in correspondence to the technical relationships between the subcomponents of the device (emphasis added).

Therefore, Applicants submit that patentability arguments analogous to those presented in connection with the patentability of amended claim 1 apply to independent claim 14 with equal force.

Further, in citing col. 7, ln. 4-26, and by referring to Fig. 11, Fig. 12 and Fig. 13 of the reference, the Examiner refers only in very general terms to the disclosure of Saucedo that “The Graphical User Interface is an important component of ODSS and VSDE. In using the VSDE, many of the flexibility comes from user-friendly GUIs. Mainly there are three types of interfaces in ODSS. ... In this case ODSS evaluated six different design alternatives against a set of designer specified criteria and ranked them in numerical order.” The cited passage fails to have a clear and definite correlation with the above-cited limitations of claim 14. As such, the grounds of rejection appear to be in error.

For at least these reasons, Applicants submit that independent claim 14 is patentable over the prior art made of record.

The Patentability of Claims 15 and 16

Regarding claims 15 and 16, Applicants note that the system comprises a connection between the real device and the processing device, which makes it possible to achieve control of the real device with the support of the information, operating and monitoring system in an easy manner.³

³ See application text, page 6, ln. 1-11

Regarding the grounds of rejection of claim 6 (connection between the processing device and the real device) and the Examiner's statements with reference to Fig. 35 of the Saucedo, Applicants note that Fig. 35 only shows the general interrelationship between a user and a computerized prototyping system, but not between a user and a real device.⁴ Saucedo neither teaches or suggests such a connection.

For at least these reasons, Applicants submit that claims 15 and 16 are patentable over the prior art made of record.

⁴ See Saucedo reference, col. 3, ln. 43-45

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Conclusion:

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

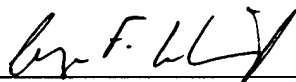
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